

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Adam William Saxler
Application Serial No.: To be assigned
Filed: Concurrently herewith
For: NITRIDE HETEROJUNCTION TRANSISTORS HAVING CHARGE-TRANSFER
INDUCED ENERGY BARRIERS AND METHODS OF FABRICATING THE SAME

Date: February 5, 2004

MAIL STOP PATENT APPLICATION
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

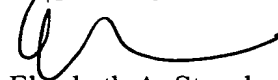
INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Sir:

Attached is a list of documents on Form PTO-1449, together with a copy of any listed foreign patent document and/or non-patent literature. A copy of any listed U.S. patent and/or U.S. patent application publication is not provided herewith in accordance with the waiver by the U.S. Patent and Trademark Office of requirements under 37 C.F.R. § 1.98(a)(2)(i) for all U.S. national patent applications filed after June 30, 2003 and for all international applications that have entered the national stage under 35 USC § 371 after June 30, 2003.

It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. § 1.56 and Section 609 of the MPEP. No fee is believed due; however, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-0220.

Respectfully submitted,



Elizabeth A. Stanek
Registration No. 48,568

Myers Bigel Sibley & Sajovec, P.A.
P. O. Box 37428
Raleigh, North Carolina 27627
Telephone: (919) 854-1400
Facsimile: (919) 854-1401
Customer No. 20792

CERTIFICATE OF MAILING UNDER 37 CFR § 1.10

"Express Mail" mailing label number EV381447430US

Date of Deposit: February 5, 2004

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Mail Stop Patent Application, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Traci A. Brown

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)				Attorney Docket Number: 5308-389		Serial No.: To be determined	
				Applicants: Adam William Saxler			
				Filing Date: Concurrently herewith		Group: Unknown	
U. S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1	4,424,525	01/03/84	Mimura	357	23	
	2	4,471,366	09/11/84	Delagebeaudeuf et al.	357	16	
	3	4,727,403	02/23/88	Hilda et al.	357	22	
	4	4,946,547	08/07/90	Palmour et al.	156	643	
	5	5,192,987	03/09/93	Khan et al.	257	183.1	
	6	5,200,022	04/06/93	Kong et al.	156	612	
	7	5,210,051	05/11/93	Carter, Jr.	437	107	
	8	5,292,501	03/08/94	Degenhardt et al.	424	49	
	9	5,296,395	03/22/94	Khan et al.	437	40	
	10	5,393,993	02/28/95	Edmond et al.	257	77	
	11	5,523,589	06/04/96	Edmond et al.	257	77	
	12	5,701,019	12/23/97	Matsumoto et al.	257	192	
	13	5,705,827	01/06/98	Baba et al.	257	46	
	14	6,046,464	04/04/00	Schetzina	257	96	
	15	6,064,082	05/16/00	Kawai et al.	257	192	
	16	6,177,685 B1	01/23/01	Teraguchi et al.	257	20	
	17	6,218,680B1	04/17/01	Carter, Jr. et al.	257	77	
	18	6,316,793	11/13/01	Sheppard	257	103	
	19	6,429,467	08/06/02	Ando	257	194	
	20	6,515,316	02/4/03	Wojtowicz et al.	257	194	
	21	6,548,333	04/15/03	Smith	438	172	
	22	US2001/0015446A1	08/23/01	Inoue et al.	257	192	
	23	US2001/0020700A1	09/13/01	Inoue et al.	257	20	
	24	US2001/0023964A1	09/27/01	Wu et al.	257	368	
	25	US2002/0017696A1	02/14/02	Nakayama et al.	257	471	
	26	US2002/0167023A1	11/14/02	Chavarkar et al.	257	194	
	27	US2003/0102482A1	06/05/03	Saxler	257	85	
	28	Re. 34,861	02/14/95	Davis et al.	437	100	

EXAMINER _____

DATE CONSIDERED _____

*EXAMINER

Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)				Attorney Docket Number: 5308-389		Serial No.: To be determined	
				Applicants: Adam William Saxler			
				Filing Date: Concurrently herewith		Group: Unknown	
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation Yes No
	30	WO 03/049193 A1	06/12/03	PCT			
	31	JP02002016087	01/18/02	Japan			
	32	JP02001230407A	08/24/01	Japan			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	33	Asbeck et al. "Piezoelectric charge densities in AlGaIn/GaN HFETs," <i>Electronics Letters</i> . Vol. 33, No. 14, pp. 1230-1231, 1997.					
	34	Eastman et al. "GaN materials for high power microwave amplifiers," <i>Mat. Res. Soc. Symp. Proc.</i> Vol. 512 (1998).					
	35	Eastman et al. "Undoped AlGaIn/GaN HEMTs for Microwave Power Amplification," <i>IEEE Transactions on Electron Devices</i> . Vol. 48, No. 3, March 2001, pp.479-85.					
	36	Gaska et al. "Electron Transport in AlGaIn-GaN Heterostructures Grown on 6H-SiC Substrates," <i>Appl.Phys.Lett.</i> , 72, 707 (1998)					
	37	Gaska et al. "High-Temperature Performance of AlGaIn/GaN HFET's on SiC Substrates," <i>IEEE Electron Device Letters</i> . Vol. 18; No. 1, p. 492, October 1997.					
	38	Gelmont et al. "Monte Carlo simulation of electron transport in gallium nitride," <i>J.Appl.Phys.</i> 74, 1818 (1993)					
	39	Heikman et al., Growth of Fe-Doped Semi-insulating GaN by Metalorganic Chemical Vapor Deposition, <i>Appl. Phys. Lett.</i> 81, pp. 439-441 (2002).					
	40	Ping et al. "DC and Microwave Performance of High-Current AlGaIn/GaN Heterostructure Field Effect Transistors Grown on P-Type SiC Substrates," <i>IEEE Electron Letters</i> . Vol. 19, No. 2, p. 54, February 1998.					
	41	Sheppard et al. "High Power Demonstration at 10 GHz with GaN/AlGaIn HEMT Hybrid Amplifiers." Presented at the 58 th DRC, Denver, CO, June 2000.					
	42	Sheppard et al. "Improved 10-GHz Operation of GaN/AlGaIn HEMTs on Silicon Carbide," <i>Materials Science Forum.</i> (2000) Vols. 338-342, pp. 1643-6.					
	43	Sheppard et al. U.S. Patent Application Serial No. 09/096,967 entitled, <i>Nitride Based Transistors On Semi-Insulating Silicon Carbide Substrates</i> , filed June 12, 1998.					
	44	Sullivan et al. "High-Power 10-GHz Operation of AlGaIn HFET's in Insulating SiC," <i>IEEE Electron Device Letters</i> . Vol. 19, No. 6, p. 198, June 1998.					
	45	Wu et al. "High Al-Content AlGaIn/GaN MODFET's for Ultrahigh Performance," <i>IEEE Electron Device Letters</i> . Volume 19, No. 2, p. 50, February 1998.					
	46	Yu et al. "Schottky barrier engineering in III-V nitrides via the piezoelectric effect," <i>Applied Physics Letters</i> . Vol. 73, No. 13, pp. 1880-1882, September 28, 1998.					
	47	International Search Report for PCT/US02/09398, August 26, 2002.					
	48	United States Patent Application entitled "Co-Doping for Fermi Level Control in Semi-Insulating Group III Nitrides", filed January 7, 2004 (Attorney Docket No. 5308-371).					

EXAMINER

DATE CONSIDERED

*EXAMINER

Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.